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| Education: | 1975-1979 | Haverford College, BS with honors Haverford, PA |
| | 1981-1986 | University of Pennsylvania School of Medicine Immunology Graduate Group Ph.D. awarded 1987. |
| Employment: | 1987-1990 | Cancer Research Fellow National Cancer Institute, NIH |
| | 1990-1991 | National Biotechnology Fellow National Cancer Institute, NIH |
| | 1992 - 1998 | Contract Professor of Pathology Department of Experimental and Clinical Pathology University of Udine, School of Medicine Udine, Italy |
| | 1992-1996 | Staff Fellow/Senior Staff Fellow National Cancer Institute, NIH |
| | 1996-1997 | Scientist, Cell Biology, Human Genome Sciences, Inc. |
| | 1997-1998 | Section Head, Cell Biology Human Genome Sciences, Inc. |
| | 1998-2001 | Associate Director, Preclinical Development Human Genome Sciences, Inc. |
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Publications

Cancro, M. P., M. A. Thompson, and D. M. Hilbert. 1983. Developmental aspects of B-cell repertoire phenotype. *Surv. Immunol. Res.* 2:62.

Hilbert, D. M. and M. P. Cancro. 1986. A comparative analysis of the anti-phosphorylcholine response of CLA and BALB/c mice. *Curr. Top. Microbiol. Immunol.* 127:206.

Hilbert, D. M. and M. P. Cancro. 1988. Characterization of an inbred mouse exhibiting low responsiveness to phosphorylcholine. Antibodies from low-responder mice suggest gene conversion events within the S107VH gene family. *J. Immunol.* 140:4364.

Hilbert, D. M., M. P. Cancro, P. A. Scherle, R. P. Nordan, J. Van Snick, W. Gerhard, and S. Rudikoff. 1989. T cell derived IL-6 is differentially required for antigen-specific antibody secretion by primary and secondary B cells. *J. Immunol.* 143:4019.

Degrassi, A., D. M. Hilbert, A. O. Anderson, M. Potter, and H. G. Coon. 1990. In vitro culture of a primary plasmacytoma that has retained its dependence on pristane conditioned microenvironment for growth. *Curr. Top. Microbiol. Immunol.* 166:71.

Degrassi, A., D. M. Hilbert, S. Rudikoff, A. O. Anderson, M. Potter, and H. G. Coon. 1993. In vitro culture of primary plasmacytomas requires stromal cell feeder layers. *Proc. Natl. Acad. Sci. U. S. A.* 90:2060.

Hilbert, D. M., J. G. Pumphrey, J. Troppmair, U. R. Rapp, and S. Rudikoff. 1993. Susceptibility and resistance to J3V1 retrovirus-induced murine plasmacytomagenesis in reconstituted severe combined immunodeficient mice. *Oncogene.* 8:1993.

Hilbert, D. M., K. L. Holmes, A. O. Anderson, and S. Rudikoff. 1993. Long-term thymic reconstitution by peripheral CD4 and CD8 single- positive lymphocytes. *Eur. J. Immunol.* 23:2412.

Shaughnessy, J. D., Jr., J. D. Owens, Jr., F. Wiener, D. M. Hilbert, K. Huppi, M. Potter, and J. F. Mushinski. 1993. Retroviral enhancer insertion 5' of c-myc in two translocation-negative mouse plasmacytomas upregulates c-myc expression to different extents. *Oncogene.* 8:3111.

Degrassi, A., A. De Maria, G. Lisignoli, N. Zini, P. Sabatelli, L. Cirillo, M. C. Monaco, D. M. Hilbert, F. S. Ambesi-Impimbato, and N. M. Maraldi. 1994. Transfer of HIV-1 to human tonsillar stromal cells following cocultivation with infected lymphocytes. *AIDS Res. Hum. Retroviruses.* 10:675.

Hilbert, D. M., A. O. Anderson, K. L. Holmes, and S. Rudikoff. 1994. Long-term lymphoid reconstitution of SCID mice suggests self-renewing B and T cell populations in peripheral and mucosal tissues. *Transplantation*. 58:466.

Nazarov, V., D. Hilbert, and L. Wolff. 1994. Susceptibility and resistance to Moloney murine leukemia virus-induced promonocytic leukemia. *Virology*. 205:479.

Hilbert, D. M., M. Y. Shen, U. R. Rapp, and S. Rudikoff. 1995. T cells induce terminal differentiation of transformed B cells to mature plasma cell tumors. *Proc. Natl. Acad. Sci. U. S. A.* 92:649.

Fernandez-Salguero, P., T. Pineau, D. M. Hilbert, T. McPhail, S. S. Lee, S. Kimura, D. W. Nebert, S. Rudikoff, J. M. Ward, and F. J. Gonzalez. 1995. Immune system impairment and hepatic fibrosis in mice lacking the dioxin-binding Ah receptor [see comments]. *Science* 268:722.

Hilbert, D. M., M. Kopf, B. A. Mock, G. Kohler, and S. Rudikoff. 1995. Interleukin 6 is essential for in vivo development of B lineage neoplasms. *J. Exp. Med.* 182:243.

Lisignoli, G., M. C. Monaco, A. Facchini, S. Toneguzzi, L. Cattini, D. M. Hilbert, S. Lavaroni, O. Belvedere, and A. Degrassi. 1996. In vitro cultured stromal cells from human tonsils display a distinct phenotype and induce B cell adhesion and proliferation. *Eur. J. Immunol.* 26:17.

Hilbert, D. M., T. S. Migone, M. Kopf, W. J. Leonard, and S. Rudikoff. 1996. Distinct tumorigenic potential of abl and raf in B cell neoplasia: abl activates the IL-6 signaling pathway. *Immunity*. 5:81.

Romanova, L. Y., I. A. Alexandrov, G. Schwab, D. M. Hilbert, J. F. Mushinski, and R. P. Nordan. 1996. Mechanism of apoptosis suppression by phorbol ester in IL-6-starved murine plasmacytomas: role of PKC modulation and cell cycle. *Biochemistry* 35:9900.

*Fernandez-Salguero, P. M., D. M. Hilbert, S. Rudikoff, J. M. Ward, and F. J. Gonzalez. 1996. Aryl-hydrocarbon receptor-deficient mice are resistant to 2,3,7,8-tetrachlorodibenzo-p-dioxin-induced toxicity. *Toxicol. Appl. Pharmacol.* 140:173.

Roschke, V., P. Hausner, E. Kopantzev, J. G. Pumphrey, M. Riminucci, D. M. Hilbert, and S. Rudikoff. 1998. Disseminated growth of murine plasmacytoma: similarities to multiple myeloma *Cancer Res.* 58:535.

Hilbert, D. M., Theisen, P. W., Rudikoff, E. K., and S. R. Bauer, 1998. Interaction of abl and raf with IL-7 signaling pathway and transformation pf pre-B cells from resistant mice. *Oncogene* 17:2125.

Belvedere, O., Feruglio, C., Malangone, W., Bonora, M. L., Donini, A., Dorotea, L., Tonutti, E., Rinaldi, C., Pittini, M., Baccarani, M., Del Frate, G., Biffoni, F., Sala, P., Hilbert, D. M., and Degraffi, A. 1999. Phenotypic characterization of immunomagnetically purified umbilical cord blood CD34+ cells. *Blood Cells, Molecules, and Disease*. 25:141-146.

Belvedere, O., Feruglio, C., Malangone, W., Bonora, M. L., Minisini, A. M., Spizzo, R., Donini, A., Sala, P., De Anna, D., Hilbert, D. M., and Degraffi, A. 2000. Increased blood volume and CD34+CD38- progenitor cell recovery using a novel umbilical cord blood collection system. *Stem Cells* 18:245.

Gronowski, A. M., Hilbert, D. M., Sheehan, K. C., Garotta, G., Schreiber, R. D. 1999. Baculovirus stimulates antiviral effects in mammalian cells. *J Virol.* 73:9944-51.

Moore, P.A., Belvedere, O., Orr, A., Pieri, K., LaFleur, D.W, Feng, P., Soppet, D., Charters, M., Gentz, R., Parmelee, D., Li, Y., Galperina, O., Giri, J., Roschke, V., Nardelli, B., Carrell, J., Sosnovtseva, S., Greenfield, W., Ruben, S. M., Olsen, H. S., Fikes, J., Hilbert, D. M. 1999. BLYS: member of the tumor necrosis factor family and B lymphocyte stimulator. *Science*. 285:260-263.

Nardelli, B., Belvedere, O., Roschke, V., Moore, P. A., Olsen, H. S., Migone, T. S., Sosnovtseva, S., Carrell, J. A., Feng, P., Giri, J. G., and Hilbert, D. M. 2001. Synthesis and Release of B Lymphocyte Stimulator from Myeloid Cells. *Blood* 97(1):198-204.

Do, R. K., Hatada, E., Lee, H., Tourigny, M. R., Hilbert, D., Chen-Kiang, S. 2000. Attenuation of apoptosis underlies BLYS enhancement of humoral immune response. *J. Exp. Med.* 192(7):953-964.

Kanakaraj, P., Migone, T. S., Nardelli, B., Ullrich, S., Li, Y., Olsen, H. S., Salcedo, T. W., Kaufman, T., Chochrane, E., Gan, Y., Hilbert, D. M., Giri, J. 2000. BLYS binds to B cells with high affinity and induces activation of the transcription factors Nf-kB and ELF-1. *Cytokine* 13(1):25-31.

Cheema, G. S., Roschke, V., Hilbert, D. M., and Stohl, W. 2001. Elevated serum B Lymphocyte Stimulator (BLYS) levels in patients with systemic immune-based rheumatologic diseases. *Arthritis and Rheumatology* 44(6):1313-9.

Harless, S. M., Lentz, V. M., Sah, A.P., Hsu, B.L., Clise-Dwyer, K, Hilbert' D. M., Hayes, C. E., and Cancro, M.P. 2001. Competition for BLYS-mediated signaling through Bcnd/Br3 regulates peripheral B lymphocyte numbers. *Current Biology*.11:1986-89.

Briones, J., Timmerman, J. M., Hilbert, D. M., Levy, R. 2002. BLYS and BLYS receptor expression in non-Hodgkin's lymphoma. *Exp. Hematology* 30:135-141.

Hsu, B. L., Harless, S. M., Coleman Lindsley, R., Hilbert, D. M., Cancro, M. P. BLyS enables survival of transitional and mature B cells through distinct mediators. *J. Immunol.* 168:5993-96.

Litinskiy MB, Nardelli B, Hilbert DM, He B, Schaffer A, Casali P, Cerutti A. 2002. DCs induce CD40-independent immunoglobulin class switching through BLyS and APRIL. *Nature Immunol.* 3:822-9.

Cheema, G. S., Roschke, V., Sosnovtseva, S., Hilbert, D. M., Stohl, W. 2002. Enhancement of circulating levels of autoantibodies by B Lymphocyte Stimulator Protein requires helper T cells: Lessons from HIV-infected patients. *Clin Immunol.* 104:115.

Roschke, V., Sosnovtseva, S., Ward, C. D., Hong, J. S., Smith, R., Albert, V., Stohl, W., Baker, K., Ullrich, S., Nardelli, B., Hilbert, D. M., Migone, T. 2002, BLyS and April form biologically active heterotrimers that are expressed in patients with systemic immune-based rheumatic diseases. *J. Immunol.* 169:4314-4321.

Nardelli, B., Moore, P. M., Li, Y., and Hilbert, D. M. 2002. BLyS: A therapeutic trichotomy for the treatment of B cell disease. *Leukemia and Lymphoma* 43:1367-1373.

Tan, S., Roschke, V., Perry, J. W., Arkfeld, D. G., Ehresmann, G. R., Migone, T., Hilbert, D. M., Stohl, W. 2003. Local production of B Lymphocyte Stimulator (BLyS) protein and A Proliferation-Inducing Ligand (APRIL) in arthritic joints of patients with inflammatory arthritis. *Arthritis and Rheumatology* 48:982-992

Stewart, D. M., Patel, D. D., AcAvoy, M., Louie, A., Orr, A., Hong, J., Pieri, K., Heater, M. D., Butscher, A. L., Hilbert, D. M., Buckley, R. H., and Nelson, D. L. 2001, B lymphocytes from patients with Common Variable Immune Deficiency proliferate and secrete Ig in response to B Lymphocyte Stimulator (BLyS). *Clinical Immunology* in press.

Baker, K. P., Edwards, B. M., Main, S. H., Choi, G., Wager, R. E., Abramian, D., Sekut, L., Sturm, B., Minter, R., Dobson, C. L., Williams, E., Carmen, S., Smith, R., Roschke, V., Ruben, S., Hilbert, D. M., Vaughan, T. J., and Albert, V. R. 2003 Generation and Characterization of LymphoStat-BTM, a Human Monoclonal Antibody that Antagonizes BLyS Bioactivities. *Arthritis and Rheumatology* in press.

Schaller, M., Stohl, W., Tan, S., Benoit, B. M., Hilbert, D. M., Ditzel, H. J. 2003. Elevated serum and synovial fluid levels of anti-glucose-6-phosphate isomerase (GPI) IgG and GPI in patients with a variety of inflammatory arthritic diseases. *Arthritis and Rheumatology* Submitted.

Fleming, T. J., Sachdeva, M., Delic, M., Beltzer, J., Sexton, D. J., Wescott, C. R., Lander, R. C., Roschke, V., and Hilbert, D. M. 2001. Identification of high affinity peptides for BLyS by phage display. *Submitted*.